

 <p>United States Environmental Protection Agency Washington, DC 20460</p> <p>Interagency Agreement/ Amendment</p> <p>Part 1 - General Information</p>		1. EPA IA Identification Number DW-70-95775601 - 4		2. Funding Location by Region EPA R5					
		3. Other Agency IA ID Number (if known)		4. Awarding Office IASSC West					
		5. Type of Action Augmentation: Increase		6. IA Specialist: Aaron Simril 206-553-0459 Simril.Aaron@epa.gov					
7. Name and Address of EPA Organization US Environmental Protection Agency IASSC West 1200 Sixth Avenue, Suite 900, OMP-145 Seattle, WA 98101			8. Name and Address of Other Agency U.S. Department of Homeland Security USCG / Acquisition Directorate R&D Center / 1 Chelsea Street New London, CT 06320						
9. DUNS: 029128894		10. BETC: DISB		11. DUNS: 806754677					
				12. BETC: COLL					
13. Project Title and Description Great Lakes Restoration Initiative Implementation - U.S. Coast Guard (USCG) To reduce the number of introductions and transfer rate of non-indigenous species carried in ballast water; to develop detection and response techniques to oil in icy water; to develop a system that will recover heavy oil from the sea floor; to reduce sources of toxic substances on Coast Guard property in the Great Lakes area. This amendment increases Federal Funding by \$1,872,986, updates the Scope of Work, and updates Term and Condition #26.									
14. EPA Project Officer (Name, Address, Telephone Number) Laura Evans 77 West Jackson Blvd. Chicago, IL 60604-3507 312-886-0851 E-Mail: Evans.Laura@epa.gov FAX: 312-692-2021			15. Other Agency Project Officer (Name, Address, Telephone) Loretta McRae ORM/Budget Execution Division/2100 2nd St. SW Washington, DC 20593-7245 202-372-3559 E-Mail: Loretta.K.McRae@uscg.mil FAX:						
16. Project Period: 02/24/2010 to 05/30/2014			17. Budget Period: 02/24/2010 to 05/30/2014						
18. Scope of Work (See Attachment) The revised Scope of Work is attached.									
19. Employer/Tax ID No. 520852695		20. CAGE No: 347A4		21. ALC: 68-01-0727					
22. Statutory Authority for Transfer of Funds and Interagency Agreement Consolidated Appropriations Act; 2012; and Public Law 113-6; Consolidated Appropriations Act; 2012; Public Law 112-74; Department of Defense and Full-Year Continuing Appropriations Act; 2011 (PL 112-10); Public Law 111-88; Department of Interior, Environment and Related Agencies Appropriations Act 2010					23. Other Agency Type Federal Agency				
24. Revise Reimbursable Funds and Direct Fund Cites (only complete if applicable)									
	Previous Funding		This Action		Amended Total				
Revise Reimbursable (in-house)					0				
Direct Fund Cite (contractor)					0				
Total					0				
	Previous Amount		Amount This Action		Total Amount				
25. EPA Amount	\$11,574,700		\$1,872,986		\$13,447,686				
26. EPA In-Kind Amount					\$0				
27. Other Agency Amount	\$1,465,228		\$0		\$1,465,228				
28. Other Agency In-Kind Amount					\$0				
29. Total Project Cost	\$13,039,928		\$1,872,986		\$14,912,914				
30. Fiscal Information									
Treas. Symbol	DCN	FY	Appropriation	Budget Org	PRC	Object Class	Site/Project	Cost Org	Ob/De-Ob Amt
683/40108	1305HDX020	1314	B	05HM0	202BJ7XF2	2506			1,322,986
683/40108	1305HDX020	1314	B	05HM0	202BJ7XF1	2506			550,000

Part II - Approved Budget				EPA IAG Identification Number DW-70-95775601 - 4
31. Budget Categories	Itemization of All Previous Actions	Itemization of This Action	In-Kind Itemization of This Action	Itemization of Total Project Cost to Date
(a) Personnel	\$979,360	\$109,137		\$1,088,497
(b) Fringe Benefits	\$0	\$101,544		\$101,544
(c) Travel	\$272,850	\$16,400		\$289,250
(d) Equipment	\$12,000			\$12,000
(e) Supplies	\$20,000			\$20,000
(f) Procurement / Assistance	\$11,080,663	\$1,645,905		\$12,726,568
(g) Construction	\$0			\$0
(h) Other	\$0			\$0
(i) Total Direct Charges	\$12,364,873	\$1,872,986	\$0	\$14,237,859
(j) Indirect Costs:	\$675,055			\$675,055
Charged - Amount Rate: % Base: \$ Not Charged: Funds-Out: Not charged by Other Agency Estimate by other Agency Amount \$				
(k) Total (EPA Share 90.17 %) (Other Agency Share 9.83 %)	\$13,039,928	\$1,872,986	\$0	\$14,912,914
32. How was the IDC Base calculated?				
33. Is equipment authorized to be furnished by EPA or leased, purchased, or rented with EPA funds? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Identify all equipment costing \$1,000 or more) TBA				
34. Are any of these funds being used on extramural agreements? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
Type of Extramural Agreement Contract				
Contractor/Recipient Name (if known)	Total Extramural Amount Under This Project		Percent Funded by EPA (if known)	
TBA	12726568 Total. \$ 12,726,568.00		100	
Part III - Funding Methods and Billing Instructions				
35.	(Note: EPA Agency Location Code (ALC) - 68010727)			
<input checked="" type="checkbox"/> Disbursement Agreement	Request for repayment of actual costs must be itemized on SF 1080 and submitted to the Financial Management Office, Cincinnati, OH 45268-7002:			
<input checked="" type="checkbox"/> Repayment	<input checked="" type="checkbox"/> Monthly <input type="checkbox"/> Quarterly <input type="checkbox"/> Upon Completion of Work			
<input type="checkbox"/> Advance	Only available for use by Federal agencies on working capital fund or with appropriate justification of need for this type of payment method. Unexpended funds at completion of work will be returned to EPA. Quarterly cost reports will be forwarded to the Financial Management Center, EPA, Cincinnati, OH 45268-7002.			
<input type="checkbox"/> Allocation Transfer-Out	Used to transfer obligational authority or transfer of function between Federal agencies. Must receive prior approval by the Office of Comptroller, Budget Division, Budget Formulation and Control Branch, EPA Hdqtrs. Forward appropriate reports to the Financial Reports and Analysis Branch, Financial Management Division, PM-226F, EPA, Washington, DC 20460.			
36. <input type="checkbox"/> Reimbursement Agreement	<input type="checkbox"/> Repayment <input type="checkbox"/> Advance			
<input type="checkbox"/> Allocation Transfer-In				
Other Agency's Billing Address (include ALC or Station Symbol Number)			Other Agency's Billing Instructions and Frequency	

Part IV - Acceptance Conditions

EPA Identification Number

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37. Terms and Conditions, when included, are located at the end of the 1610-1, or as an attachment.

Part V - Offer and Acceptance

Note: A) For Fund-out actions, the agreement/amendment must be signed by the other agency official in duplicate and one original returned to the Grants and IA Management Division for Headquarters agreements or to the appropriate EPA Regional IA administration office within 3 calendar weeks after receipt or within any extension of time that may be granted by EPA. The agreement/amendment must be forwarded to the address cited in item 29 after acceptance signature.

Failure to return the properly executed document within the prescribed time may result in the withdrawal of offer by EPA. Any change to the agreement/amendment by the other agency after the document is signed by the EPA Award Official, which the Award Official determines to materially alter the agreement/amendment, shall void the agreement/amendment.

B) For Funds-In actions, the other agency will initiate the action and forward two original agreements/amendments to the appropriate EPA program office for signature. The agreements/amendments will then be forwarded to the appropriate EPA IA administration office for signature on behalf of the EPA. EPA will return one original copy after acceptance returned to the other agency after acceptance.

EPA IA Administration Office (for administrative assistance)**EPA Program Office (for technical assistance)****38. Organization/Address**

U.S. Environmental Protection Agency
IASSC West
1200 Sixth Avenue, Suite 900, OMP-145
Seattle, WA 98101

39. Organization/Address

US Environmental Protection Agency
R5 - Region 5
77 West Jackson Blvd.
Chicago, IL 60604-3507

Award Official on Behalf of the Environment Protection Agency

40. Digital signature applied by EPA Award Official | FOR Armina K. Nolan - Manager - Grants and Interagency Agreements Unit
Tony Fournier - AO delegate

Date

07/02/2013

Authorizing Official on Behalf of the Other Agency**41. Signature****Typed Name and Title**

John E. Hallman, USCG

Date

08/07/2013

Great Lakes Restoration Initiative

Interagency Agreement

Scope of Work

FY2013

AGENCY NAME:

US Coast Guard, Office of Research, Development, Test & Evaluation, CG-926

CONTACT INFORMATION:

Toxic Substances – Mr. Shannon Jenkins

Office of Research, Development, Test & Evaluation
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Washington, DC 20593-7111
(202)475-3490
Shannon.R.Jenkins@uscg.mil

Invasive Species – Mr. Jaurin Joseph

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1. INTRODUCTION

The USCG Marine Environmental Protection (MEP) program develops and enforces regulations to avert the introduction of invasive species into the maritime environment via the operations of vessels, stop unauthorized ocean dumping, and prevent oil and chemical spills. The US Coast Guard Research and Development Center has two efforts that directly support the MEP program in the Great Lakes. The overall purpose of this Interagency Agreement is to fund efforts that will help prevent the introduction of toxic substances and invasive species into the Great Lakes.

Oil in Ice. Although oil spills in ice are rare in the Great Lakes, they are still of concern. While most oil releases during the winter months are runoffs from transportation accidents on land, changes in temperature and water level may increase risk of water spills as vessels attempt to begin the season earlier and end it later. The oil in ice project will use a series of increasingly more complex field demonstrations to help assess situations for potential spills in the Great Lakes during the ice season and determine methods for response. Where identified, this effort will include developing technologies and procedures to address response performance gaps. Cooperation with organizations in Alaska will help to identify other extreme cold weather response techniques that may be applicable. GLRI funding is being used to supplement USCG RDT&E funding of field demonstrations; and technology and decision tools development supporting this effort. The first demonstration was conducted pier-side at Sector Sault Ste Marie. Various cold weather spill response technologies were demonstrated in early April 2011. A more complex demonstration was conducted using commercial tugs and a USCG vessel in late January 2012. A more complex demonstration involving additional commercial and USCG assets is planned for the late winter of 2013 to evaluate response management processes/tools and additional cold weather spill response techniques from candidate vessels operating in the Great Lakes.

Ballast Water. The Great Lakes are sensitive to introductions of Invasive species (IS) via ballast water discharges by vessels entering the lakes after operating in the ocean (Salties) and translocation of IS within the Lakes by vessels transiting between ports, including Salties and vessels that operate exclusively within the Lakes (Lakers). The U. S. Coast Guard is tasked by the National Invasive Species Act (1996) to stop ship-mediated introductions of IS into U.S. waters. This program will further the development of effective and practical systems to treat ships' ballast water to prevent introductions and spread of IS. Funding will be used to develop methods and tools used to enforce compliance of ballast water discharge regulations on the Great Lakes; continue work on developing ship-based test protocols for Ballast Water Treatment Systems (BWTS) type approvals to operate in US waters; continue work supporting the enforcement of compliance to ballast water discharge standards within the Great Lakes; and to continue investigating the feasibility of developing a protocol for testing BWTS against a significantly more stringent ballast water discharge standard. Previous CG efforts and funds supported the development of a shore-based protocol for testing BWT systems. GLRI funds have been used to leverage much of the shore-based protocol to develop a shipboard test protocol; conduct investigative work on the effects of BWTS on corrosion aboard Lakers; and investigate safety risks to vessels and personnel working in the vicinity of the CSSC fish barrier.

2. BUDGET & PROJECT DETAIL

Focus Area	Project Title	Draft Allocation
TX	Response to Oil in Ice	\$250,000
IS	Ballast Water Treatment Improvements & Enforcement	\$1,322,986

3. NARRATIVE SCOPE OF WORK:

Title: Response to Oil in Ice

Funding: \$250,000

Authority: The CG has multiple authorities including the Clean Water Act and the Oil Pollution Act of 1990.

Work: This project approach was to assess and fully define the problem; identify user wants and needs; identify performance gaps; and identify and develop solutions to those gaps. First, a literature search and a search of the CG databases was conducted for data referring to spills in the Great Lakes and other fresh water bodies. A one-day workshop was convened to compile assessment data and develop likely scenarios. Then analysis was performed to match the scenarios and leverage efforts that have already been done in the Arctic region. A series of increasingly complex demonstrations are planned to assist in demonstrating existing response technologies and techniques; and identify current capability gaps. As performance gaps are identified for detection and recovery, additional efforts will be started to develop or adapt new techniques and technologies. FY13 GLRI funds will be used for the funding the third FY13 Great Lakes demonstration; and begin development of technologies and decision tools to address performance gaps.

Milestones:

Project Begins with RDC Funds	December 2009
Great Lakes Assessment Workshop (complete)	August 2010
Initial Gap Analysis (complete)	December 2010
1 st Field Great Lakes demonstration (complete)	April 2011

1 st Demonstration Report (complete)	July 2011
2 nd Field Great Lakes Demonstration (complete)	January 2012
2 nd Demonstration Report (complete)	June 2012
3 rd Field Great Lakes Demonstration	January 2013
Key Decision Point on project direction	February 2013
3 rd Field Demonstration Report	June 2013
Technology and decision tools development	FY13-FY15

Great Lakes Action Plan Measure of Progress:

Long Term Goal 2

The release of toxic substances in toxic amounts is prevented and the release of any or all persistent toxic substances (PTS) to the Great Lakes basin ecosystem is virtually eliminated.

There are no specific Action Plan Objectives or Measures of Progress that are relevant to this project. Containment and removal of discharged oil from Great Lakes waters as quickly as possible during the winter periods will minimize the environmental impact to the Great Lakes basin ecosystem. Outcomes of this project will provide valuable input for the 17 Coast Guard area contingency plans on the Great Lakes that would be activated in response to an oil spill in or on ice. It will also provide input to tank vessel operators and marine transportation facility operators who must maintain vessel and facility response plans that include a capability to respond to oil discharged on or in ice.

This project will also benefit Great Lakes response efforts. The demonstration will afford local responders the opportunity to deploy response technologies and practice response techniques in icy water conditions, thus gaining valuable experience that can be utilized when an actual spill in these conditions occurs.

Title: Ballast Water Treatment Improvements & Enforcement

Funding: \$1.322986 million

Authority: U.S. Coast Guard is tasked to reduce the number of introductions of NIS under the National Invasive Species Act of 1996 (NISA '96).

Work:

Ship-Based Approval Tests: As part of its type approval process, Coast Guard intends to require tests of BWTS aboard a ship. Project work will continue with the final tests of a protocol for shipboard testing, based on the shore-based protocol developed collaboratively by the USCG and EPA through the Environmental Technology Verification (ETV) Program; and testing recommendations developed through the USCG STEP. Validating the shipboard test protocols continues to be a cooperative effort between MARAD, EPA/ETV, and the Research and Development Center (RDC). MARAD selected the Indiana Harbor as the Laker vessel to be used as a test platform and field tests continue to be conducted aboard that vessel. USCG and EPA developed the draft Shipboard Test protocol under ETV; and the RDC developed a means to sample large volumes of ballast water and validate both the sampling mechanism and the test protocol aboard Indiana Harbor. As testing progresses, the draft Shipboard Test protocol will be updated using results from the ongoing tests. As follow-on work, we plan to begin investigating the scalability of BWTS test processes to amply address the larger ballast water discharge volumes and flow rates of Lakers.

Ship-Based Compliance Enforcement: Tools and methods for rapidly evaluating whether a BWT system has been used and is working properly are necessary for shipboard compliance enforcement. Such tools could also potentially be used by BWTS operators to check the efficacy of their systems. RDC used an RFI to determine what technologies are available; and began development of technologies needed to produce specific field verification tools. Based on these technologies, methods and procedures are being developed for efficiently and economically assessing compliance with Ballast Water Discharge Standards. This will result in an Operating Concept for BWDS enforcement that is compatible with the new standards and the new technologies. This effort is also helping frame the changes in procedures, manpower, training, and logistics that are necessary to adequately enforce the BWDS. It is expected that a mix of increased CG capability, new technology, leveraging other agencies, and leveraging the regulated community will be required.

More Stringent Ballast Water Discharge Standard (BWDS) Research, Development, Test, and Evaluation (RDT&E) Support: A reduced BWDS is valuable only if it can be attained by treatment systems; can be measured during BWT approval tests; its general use can be enforced; and all phases of testing, validating and commercial use are practical. RDC will continue to investigate the feasibility of whether sampling and testing protocols that can assure accurate measurement of compliance with more stringent performance standards can practicably be implemented. Work will also be initiated to investigate whether technology developed to comply with a much more stringent BWDS can be implemented without an undue burden on the shipping industry. Work will continue to determine the volumes of water required and the logistics of collecting, concentrating and counting organisms, in all size classes, to achieve the proposed reduced standard up to 1000x more stringent than the IMO/CG performance standard. Consideration will need to be given to the availability, accuracy, precision, and cost effectiveness of methods and technologies for measuring the concentrations of organisms, treatment chemicals, or other pertinent parameters in treated ballast water as would be required under any alternative discharge standard.

Funds will be used to complete a preliminary investigation into the statistical and sampling issues prerequisite to being able to state with statistical confidence that the more stringent performance standard is met during a test. The effectiveness of the current protocol to accurately and precisely detect organisms at significantly lower concentrations than in the CG BWDS is not well resolved. Testing of the current protocol's limits of detection is needed; and, as identified by the recent EPA Science advisory Board Report on BWT technology, research and development of an enhanced protocol may be necessary to support testing at more stringent ballast water discharge standards. Follow-on work will investigate the feasibility of leveraging current protocol development work from CG BWDS. Once developed and approved, this protocol will be used by shore-based test facilities to test commercial ballast water treatment systems to determine if they perform in accordance with the more stringent BWDS.

Milestones

Ship-Based Approval Tests:

RFI (complete)	February 2011
Contract – Shipboard Tests (complete)	July 2011
Develop Generic Protocol for Filtration Skid (complete)	February 2012
Validation of Filtration Skid (Complete)	April 2012
Start Shipboard Testing (Ongoing)	May 2012
Shipboard Testing complete	September 2013
Report – Shipboard Approval Tests	April 2014
Investigate standard surrogate species	FY2014
Investigate the scalability of BWTS test results	FY2015

Shipboard Compliance:

Contract-Technology Market Research (complete)	March 2011
Report-Market Research Assessment	October 2012

Tools Development BAA	February 2013
Evaluate BAA Responses	March 2013
Award Tools Design Contracts	July 2013
Evaluate Tools Designs	December 2013
Execute Tools Development Option	February 2014
Controlled/Lab Test Tools Prototypes	May 2015
Test Report	July 2015
Compliance Procedures Development	March 2016

More Stringent BWDS Test Protocol Development:

Develop Practicability Review Plan	December 2013
Determine detection limits of protocols	September 2014
Determine thresholds of treatment technologies	February 2015
Final Report-BWDS Practicability Review	November 2015
Key Decision Point – Project direction	December 2015
Develop new sampling techniques	FY2016
Develop new measurement methods & capabilities	FY2017
Revise testing protocols for new standard	FY2017
Develop new compliance validation tools	FY2019

Great Lakes Action Plan Measure of Progress:

Long Term Goal 1

The introduction of new invasive species (via ballast water) to the Great Lakes basin ecosystem is eliminated, reflecting a “zero tolerance policy” toward invasives.

Objective

Ten technologies that prevent the introduction of invasive species and five technologies that either contain or control invasive species will be developed or refined and piloted by 2014.

Measure of Progress 1

Rate of non-native species newly detected in the Great Lakes ecosystem does not exceed one (1.0) species per year. These results can be achieved after the project work has been completed and ballast water treatment systems are operating on all vessels discharging ballast water into the Great Lakes and the Coast Guard is able to ensure the systems are operating as designed.

Results of these tasks will be the development of ship-based test protocols for ballast water treatment systems (BWTS) for use on vessels entering the Great Lakes; production-ready field verification tools for enforcing the BWDS on the Great Lakes; procedures for conducting CG inspections and performance verifications of operational BWTS on vessels discharging ballast water on the Great Lakes; and science-based analysis of practicability of the government proceeding with implementation of the Phase 2 Ballast Water Discharge Standard for vessels discharging ballast water on the Great Lakes.

Results will be: developed ship-based test protocols for BWTS; production-ready field verification tools for BWDS; procedures for USCG conducting field inspections and performance verifications of operational BWTS; and science-based analysis of practicability of the Government proceeding with implementation of more stringent Ballast Water Discharge Standards.

4. COLLABORATIVE ARRANGEMENTS

The RDC has in place a MIPR with MARAD for supporting ship-based Approval Tests. Continued coordination with MARAD is ongoing for all ballast water treatment efforts. EPA ETV is also collaborating by developing the ship-based test protocol; and will be involved in coordination for the more stringent BWDS practicability investigation.

5. FUNDING SUMMARY SPREADSHEET

See Attached spreadsheet

Great Lakes Restoration Initiative

Interagency Agreement

Scope of Work

FY13

AGENCY NAME: U.S. Coast Guard, Civil Engineering Unit Cleveland, Ohio

CONTACT INFORMATION: Gregory O. Carpenter
Civil Engineering Unit Cleveland
1240 East Ninth Street
Cleveland, Ohio 44199
216-902-6219
Gregory.O.Carpenter@uscg.mil

1. INTRODUCTION

The objective of this effort is to comply with the requirements of Comprehensive Environmental Response, Compensation and Liability Act in order to prevent hazardous substances from entering the sediments and waters of the Great Lakes. Great Lakes Restoration initiative (GLRI) funds are being utilized at ten (10) lighthouse properties in the Great Lakes. Two (2) said properties, which have been funded with FY11 funds, are nearly complete.

2. BUDGET & PROJECT DETAIL

Provide a breakdown of the budget and projects at a glance.

Focus Area	Project Title	Draft Allocation
TX	Lighthouse Remediation	\$300,000

3. NARRATIVE SCOPE OF WORK: *broken down by discrete project in each Focus Area, list:*

Title: Outer Island Light, Wisconsin

Funding: \$300K

Authority: GLRI - CERCLA

Work: Investigate the Outer Island Light for contamination of concern relating to previous storage and use of hazardous materials under the Comprehensive Environmental Response, Compensation and Liability Act. The lighthouse property will be investigated for the specific chemicals of concern that may have been present at this location. An IAG previously exists between the USEPA Region 5 and the U.S. Coast Guard for a collaborative review of selected Great Lake properties. These remedial lighthouse investigations and cleanup activities will remove toxic substances that can potential impact sediments and waters of the Great Lakes.

Milestones:

CERCLA Site Investigation/Preliminary Assessment	September 2014
CERCLA Field Sampling Plan/Quality Assurance Project Plan	March 2015
CERCLA Engineering Evaluation/Cost Analysis	November 2016
CERCLA Removal Action	July 2017

Great Lakes Action Plan Measure of Progress:**Great Lakes Action Plan Measure of Progress:****Long Term Goal 2**

The release of toxic substances in toxic amounts is prevented and the release of any or all persistent toxic substances (PTS) to the Great Lakes basin ecosystem is virtually eliminated.

There are no specific Action Plan Objectives or Measures of Progress that are relevant to this project. However, these remedial lighthouse investigations and cleanup activities will remove toxic substances that can potentially impact sediments and waters of the Great Lakes. The nature of the remedial actions (e.g. removal of lead paints, top soil removal, small quantities of toxic substances spread throughout the site) make it difficult to accurately quantify the toxic substance amounts. Total amounts of contaminated soil removed will be available at the completion of the projects. But for project planning purposes, and based on previously remediated CG Lighthouse properties of similar age, configuration and acreage, an estimated five thousand (5,000) cubic yards of impacted soils will be properly removed and disposed of at the Outer Island Light.

Progress on this specific project is also marked and track by percentage complete with a target of twenty (20) percent project completion for the first two (2) years of obligated funds with the majority of project (sixty (60) percent) completion occurring in the third (3) year of project activity. Obligated funds and project percent complete is tracked monthly and broadcasted quarterly.

4. COLLABORATIVE ARRANGEMENTS

Interagency Agreement (IAG) exists between the USEPA Region 5 and USCG for collaborative reviews of Great Lakes projects.

5. FUNDING SUMMARY SPREADSHEET

For each focus area, identify the following budget categories: personnel, fringe benefits, travel, equipment, other, grants, contracts procurement/assistance and indirect cost. Please utilize the EPA provided model funding summary spreadsheet. See attached spreadsheet.